

Radiometric Dating

I. Radiometric dating assumes that objects can be dated based on the ratios of radioactive elements and their degradation products.

A. These dates are dependent on:

1. The initial state of the object.
2. A lack of interference with the chemicals in the object.
3. The rate of radioactive decay.

B. There are numerous problems with radiometric dating .

1. Assumptions about the initial condition of the rocks only work if they are true.
2. They assume that the rate of radioactive decay is known, constant, and unchangeable.
3. They are based on extreme extrapolation.
4. They don't have objective standards for comparison.

II. Uranium Dating

A. By comparing the ratios of uranium to lead in a rock the Earth has been dated at 4.6 billion years old.

B. There are several problems with this approach:

1. It is absurd to think that you can find a rock that has uranium without any lead.
2. If the half-life of Uranium is 4.6 billion years then:
 - a. No one should be able to live in Hiroshima or Nagasaki for thousands of years.
 - b. Nuclear reactors should last thousands of years. However, they must be rebuilt every 30 years.

III. Potassium Argon Dating

A. Potassium Argon dating is used for dating lava flows. Theoretically all the argon in lava bubbles out while it is hot. Then the radioactive potassium breaks down into argon over long periods of time. By comparing the ratio of potassium to argon you can calculate the age of the rock.

B. While the method sounds elegant it fails in practical application.

1. ANDESITE FLOWS AT MT NGAURUHOE, NEW ZEALAND, AND THE
[IMPLICATIONS FOR POTASSIUM-ARGON "DATING"](#)

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Hualalai basalt, Hawaii (AD1800) 1.6 MA

Kilauea basalt, Hawaii (<1,000 yrs old) 42.9 MA

Mt Etna basalt, Sicily (AD1792) .35 MA

Medicine Lake Highlands obsidian, Glass Mountains, California (<500 years old) 42.5 MA

IV. Carbon Dating

A. Carbon dating works on the principle that carbon is converted to carbon 14 in the atmosphere at a constant rate. While an organism is alive it should have a c-14 level equal to the atmosphere. Once the organism dies the c-14 decays with a half life of 11,000 years. By comparing the ratio of c-14 in the animal to the c-14 in the atmosphere you can calculate the age of the organism.

B. The Problems with Carbon Dating

1. The amount of c-14 is not constant.
 - a. It varies with volcanic activity, the earth's magnetic field, and fossil fuel use.
2. There are no standards.
3. The results of tests in modern history have be chaotic.
4. There are wide variations in readings from the same strata. Creation 26(1):36–39 December 2003

V. Erosion and Sedimentation

A. How long does it take to make the Grand Canyon?

1. How would you calculate it?
2. Many Geologists take the average erosion per year and then divide the height of the canyon by that number.
3. A similar approach is taken to the formation of rock layers.
4. The trouble is that this is just not how the world works.
5. Erosion and sedimentation often vary greatly over time.

VI. Mt. St. Helens

A. The eruption of Mt. St. Helens showed us dramatic evidence of the rapid pace of change that can happen.

1. Meters of sediment were laid down in a day and solidified in weeks.
2. Canyons meters deep were cut in a day.

www.creationism.org/sthelens/MSH1b_7wonders.htm

VII. The Lie of Geologic Time

A. Geology claims stalactites take thousands or millions of years to form, but there are 26 inch stalactites off the spill way of the Hoover Dam.

B. Most of us have seen dramatic examples of erosion after a storm.

C. Miners routinely find equipment fossilized after a few years.

VIII. Under Water but no Flood.

A. Geology claims that there was never a world-wide flood. Every piece of land was under water at some point, but there was no flood.

B. There are fossilized clams on the top of Mt. Everest.

C. >200 cultures record the flood story many with very specific details in agreement with the Genesis account.

IX. Stratigraphy

A. The study of strata claims to show the association of animals buried at various times.

B. There are numerous examples of animals or trees being buried through multiple levels of strata.

C. Fossils only form with rapid burial. If each layer of strata represents thousands of years then the fossils could not have formed.

D. The layers are dated on the basis of the fossils found and the fossils are dated by the layer.

E. The layers are frequently out of order.

F. Mammals and humans are frequently found in strata with dinosaurs.